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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,776	07/23/2001	Masaru Yoshitake	211753US0PCT	1156

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EXAMINER
WILLS, MONIQUE M

ART UNIT	PAPER NUMBER
1746	

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,776	YOSHITAKE ET AL.	
	Examiner	Art Unit	
	Wills M Monique	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Priority

Japanese foreign priority document(s) 11-013437 filed January 21, 1999 and submitted under 35 U.S.C. 119(a)-(d), has been received and placed of record in the file.

Information Disclosure Statement

The information disclosure statement(s) filed November 13, 2001 and June 27, 2002 have been received and complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609.

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

Claims 4-8 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend upon a multiple dependant claims. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. U.S. Patent 6,383,678 in view of Gyoten et al. U.S. Patent 6,372,373.

Kaneko teaches a separator for an electrochemical fuel cell provides a path for a fuel gas and an oxidative gas to an electrode and functions as a wall of a unit cell of the fuel cell. The separator comprises a conductive metal plate, a conductive coating membrane, and a tight coating membrane. The conductive coating membrane coats the conductive metal plate where the separator contacts the electrode. The tight coating membrane coats the conductive metal plate where the conductive coating membrane does not coat the conductive metal plate. The tight coating membrane comprises a close-grained resin. See the abstract. More specifically, the tight coating membrane is made of a basic chelate resin and coats a surface of the metal plate 322

(col. 8, lines 45-55). The chelate resin is obtained by a polymerization or a copolymerization of polymer having a chelate functional group (col. 9, lines 25-30). The conductive metal plate 22, comprises an aluminum, a stainless, or an alloy of nickel and chromium col. 4, lines 4-10. The conductive coating membrane 24 has a high conductivity and is made of carbon having a high rust resistance (col. 4, lines 20-25). The separator also has fuel and oxidant channels for supplying oxidant and fuel to respective electrodes (col. 2, lines 30-60).

The reference is silent to a fluid channel having side walls made of metal.

However, Gyoten teaches that many of the fuel cells employ a laminated structure configured by stacking a number of unit cells. In order to exhaust heat generated by the electric power during the fuel cell operation to the outside of the cells, cooling plates are arranged in every 1 to 3 unit cells of the laminated cell. The cooling plates are metallic plates having a structure wherein a thermal medium such as cooling water is distributed through. As shown in FIG.2 to FIG.4, the coolant-flow paths 24 are formed on the rear face of the separator 4, i.e. the surface where the cooling water flows through, thereby to allow the separator 4 itself to function as the cooling plate. See column 2, lines 25-45.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the cooling plate of Gyoten in the fuel cell stack of Kaneko to form metallic cooling channel in the separator plate, in order to remove heat generated by the electric power during fuel cell operation, as taught by Gyoten.

Conclusions

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

Mw

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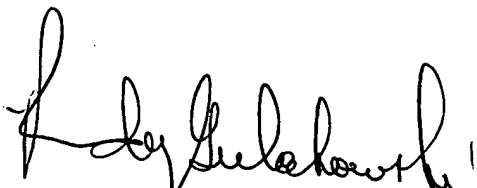

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